PATENT APPLICATION DOCKET NO.: 200312082-1

## ABSTRACT OF THE DISCLOSURE

A system and method for integrating a plurality of subcircuit grids in a simulation environment. Upon obtaining a subcircuit layer of a particular granularity for each logical component of an electrical entity (e.g., a semiconductor die in a package and board environment), the nodes of a first subcircuit layer are interconnected to the nodes of a second subcircuit layer using a constraint-based search process.